

HOW I DO IT

Incentive Spirometry as Screening Pulmonary Test

AJAY K. DEWAN, MS, MCh NITIN RAO, MS, AND SUSHIL KUMAR, MS
Department of Cancer Surgery Safdarjung Hospital New Delhi-110 029 India

Pulmonary complications are the major cause of postoperative morbidity and mortality after esophageal and upper abdominal surgery. Preoperative respiratory assessment is vital in preventing such complications.

From January 1986 to December 1991, we performed a complete profile of pulmonary function tests and lung volume and diffusion studies as part of the preoperative workup. In addition to the drawback of a 7–10-day waiting period for this costly investigation, such a facility does not exist in smaller and peripheral hospitals.

After January 1992, we started using the Triflo IITM (Sherwood Medical Co., St. Louis, MO) (Fig. 1) incentive spirometer as a screening pulmonary test. Thirty patients who were able to lift up all three balls and sustain it for at least 5 seconds were judged as low risk and were found to have normal pulmonary function tests. Thereafter, we stopped doing complete pulmonary assessment as a routine in all cases undergoing esophageal and upper abdominal surgery.

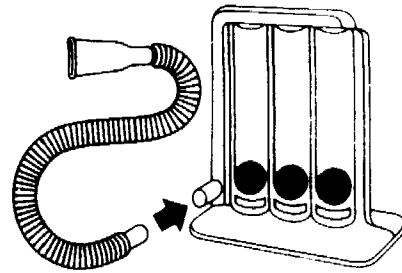


Fig. 1. Triflo incentive spirometer.

Since January, 1993, the Triflo II incentive spirometer has been used as a screening test for pulmonary assessment. It is an inexpensive (US \$6), quick bedside test. It can be used even at district level hospitals. The patient is taught sustained maximum inspiratory exercises with the spirometer and is encouraged to continue the exercises in the postoperative period.